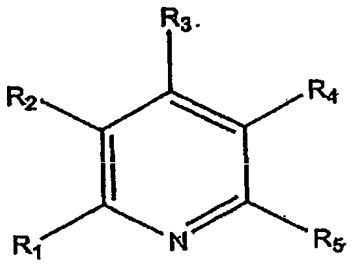
WE CLAIM:

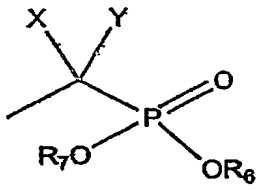
1. A compound of general formula:



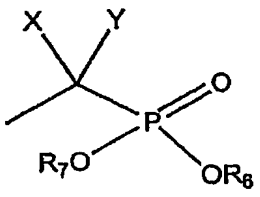
Wherein:

R_1 is selected from H and CH_3, and R_2 is selected from H and OH, or R_1 and R_2 together form an optionally substituted phenyl ring which is fused to the pyridine ring; and

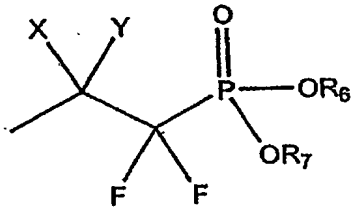
R_3 is selected from H, CH_3, CH_2OH and



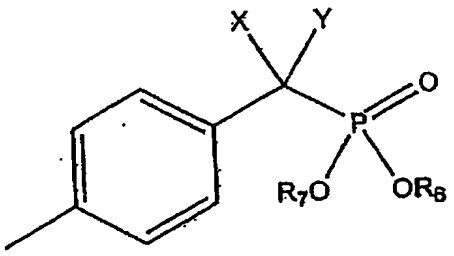
R_4 is selected from H, CH_3, CH_2OH,



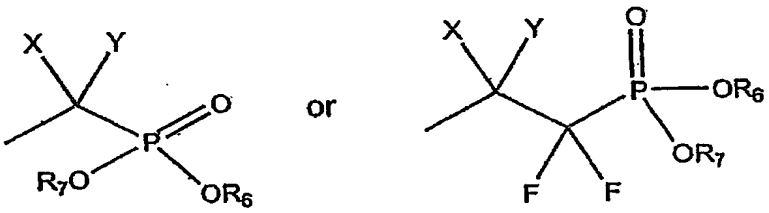
and



R_5 is selected from H, phenyl, halogen-substituted phenyl and



Wherein R_6 and R_7 are each independently selected from H, Na^+, K^+, alkyl and optionally substituted aryl, and X and Y are each independently selected from H, OH and F, or at least one of X and Y is an heteroatom and together with R_3 forms a bridge with the proviso that R_4 is



and N-oxides thereof, and biologically acceptable salts thereof.

2. The compound according to claim 1, wherein said halogen-substituted phenyl is a fluoro-substituted phenyl.

3. The compound according to claim 1, wherein said halogen-substituted phenyl is p-C_6H_4F.

4. The compound according to any one of claims 1 to 3, wherein said heteroatom is selected from O and S.

5. The compound according to any one of claims 1 to 3, wherein said heteroatom is O.

6. The compound according to any one of claims 1 to 5, wherein said bridge is selected from $-CH_2-$, $-CH_2CH_2-$ and $-CH_2CH_2CH_2-$.

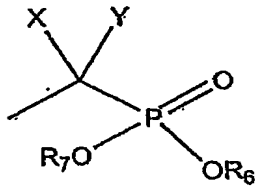
7. The compound according to any one of claims 1 to 5, wherein said bridge is a methylene bridge.

8. The compound according to any one of claims 1 to 7, wherein said alkyl is a C_1 to C_6 straight or branched alkyl.

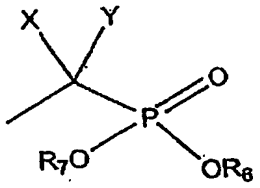
9. The compound according to any one of claims 1 to 7, wherein said alkyl is t-butyl.

10. The compound according to any one of claims 1 to 9, wherein said aryl is phenyl or naphthyl.

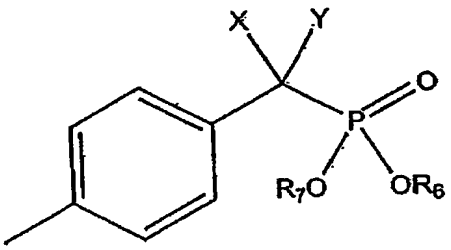
11. The compound according to claim 1, wherein R_1, R_2, R_4, R_5 are all H and R_3 is



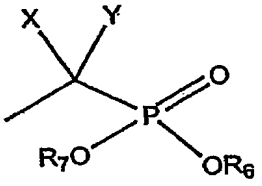
12. The compound according to claim 1, wherein R_1, R_2, R_3, R_5 are all H and R_4 is



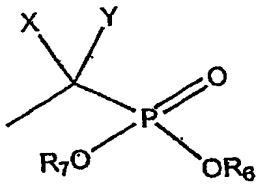
13. The compound according to claim 1, wherein R_1, R_2, R_3, R_4 are all H and R_5 is



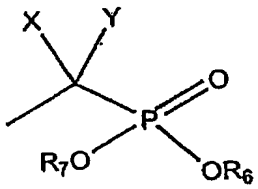
14. The compound according to claim 1, wherein R_1 and R_2 together form an optionally substituted phenyl ring which is fused to the pyridine ring; R_3 and R_5 are both H; and R_4 is



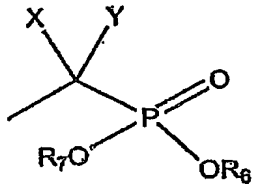
15. The compound according to claim 1, wherein R_1 and R_3 are both CH_3; R_2 is OH; R_5 is H; and R_4 is



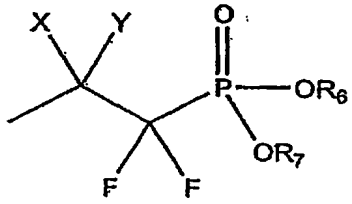
16. The compound according to claim 1, wherein R_1 and R_4 are both CH_3; R_2 is OH; R_5 is H; and R_3 is



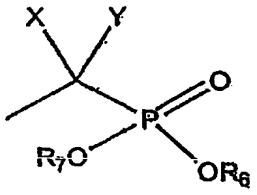
17. The compound according to claim 1, wherein R_1 is CH_3; R_2 is OH; R_3 is CH_2OH; R_5 is H; and R_4 is



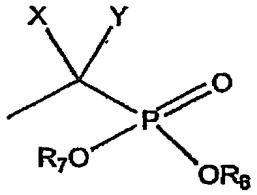
18. The compound according to claim 1, wherein R_1 is CH_3; R_2 is OH; R_3 is CH_2OH; R_5 is H; and R_4 is



19. The compound according to claim 1, wherein R_1 is CH_3; R_2 is OH; R_3 is CH_2OH; R_5 is C_6H_5; and R_4 is



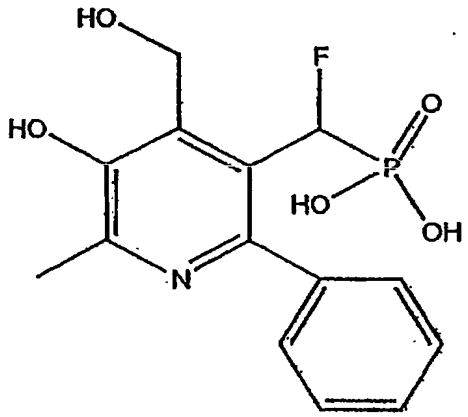
20. The compound of claim 1, wherein R_1 is CH_3; R_2 is OH; R_3 is CH_2OH; R_5 is p-C_6H_4F; and R_4 is



21. A compound according to claim 1, wherein R_5 is p-C_6H_4F.

22. A compound according to claim 1 selected from: [Hydroxy-(5-hydroxy-4-hydroxymethyl-6-methyl-2-phenyl-pyridin-3-yl)-methyl]-phosphonic acid; {[2-(4-Fluoro-phenyl)-5-hydroxy-4-hydroxymethyl-6-methyl-pyridin-3-yl]-hydroxymethyl}-phosphonic acid; [Hydroxy-(4-pyridin-2-yl-phenyl)-methyl]-phosphonic acid; [Fluoro-(4-pyridin-2-yl-phenyl)-methyl]-phosphonic acid; (Hydroxy-quinolin-3-yl-methyl)-phosphonic acid; (Fluoro-quinolin-3-yl-methyl)-phosphonic acid; [Hydroxy-(5-hydroxy-4,6-dimethyl-pyridin-3-yl)-methyl]-phosphonic acid; (Hydroxy-pyridin-4-yl-methyl)-phosphonic acid; (Hydroxy-pyridin-3-yl-methyl)-phosphonic acid; (3,7-Dihydroxy-6-methyl-1,3-dihydro-furo[3,4-c]pyridin-3-yl)-phosphonic acid; [(3,7-Dihydroxy-6-methyl-1,3-dihyrdo-furo[3,4-c]pyridin-3-yl)-difluoromethyl]-phosphonic acid; and nicotinyl phosphonates thereof, N-oxides thereof, phosphonate esters thereof and biologically acceptable salts thereof.

23. A compound according to claim 1 comprising:



24. A pharmaceutical composition comprising a therapeutically effective amount of a compound according to any one of claims 1 to 23 and a pharmaceutically acceptable carrier.

25. The compound according to any one of claims 1 to 24, wherein at least one polar group is blocked by a lipophilic moiety capable of being enzymatically cleaved off after absorption into the circulatory system.

26. The compound according to claim 25, wherein said lipophilic moiety is an ester.

27. The compound according to claim 25, wherein said lipophilic moiety is a phosphonate ester.

28. A method of treating hypertension in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

29. A method of treating myocardial infraction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

30. A method of treating ischemia reperfusion injury in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

31. A method of treating myocardial ischemia in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

32. A method of treating congestive heart failure in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

33. A method of treating arrhythmia in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

34. A method of reducing blood clots in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

35. A method of treating hypertrophy in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

36. A method of treating a disease that arises from thrombotic and prothrombotic states in which the coagulation cascade is activated in a mammal comprising

administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

37. A method of treating diabetes mellitus in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

38. A method of treating insulin resistance in a mammal comprising concurrently administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

39. A method of treating hyperinsulinemia in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

40. A method of treating diabetes-induced hypertension in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

41. A method of treating diabetes-related damage to blood vessels, eyes, kidneys, nerves, autonomic nervous system, skin, connective tissue, or immune system in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

42. A method of treating obesity in a mammal comprising administering to the mammal a therapeutically effective amount of a compound according to any one of claims 1 to 27 in a unit dosage form.

43. A compound according to any one of claims 1 to 27 which is a nicotinic acid derivative.

44. A kit comprising the composition of any one of claims 1 to 27 and instructions for its use in the treatment of a cardiovascular disease, a disease that arises from a thrombotic or prothombotic state in which the coagulation cascade is activated, diabetis, or related diseases.